

Service Manual

FM/MW/SW1/SW2/FM STEREO RADIO WITH
CASSETTE TAPE DECK AND RECORD PLAYER

Stereo Music System
SG-V03
(X)(XE)



FM/MW/SW1/SW2/FM STEREO RADIO WITH
CASSETTE TAPE DECK AND RECORD CHANGER

Stereo Music System
SG-V33
(X)(XE)



SPECIFICATIONS

AMPLIFIER SECTION

Power Output	MPO: 6.5W x 2 One Channel Driven, THD 5% 8Ω
Frequency Response	60 Hz ~ 20 kHz, -3 dB
Input Sensitivity and Impedance:	
MIC	1.5 mV, 15 kΩ
ToneControl	+4 dB, -15 dB at 10 kHz

FM TUNER SECTION

Frequency Range	87.5 MHz ~ 108 MHz
Intermediate Frequency (IF)	10.7 MHz
Sensitivity	3.5μV (S/N 26 dB Mod. 40 kHz)
Harmonic Distortion:	
Mono	0.3% (at 1 kHz 60 dB, 40 kHz)
Stereo	0.6% (at 1 kHz 60 dB, 40 kHz)
Stereo Separation	40 dB at 1 kHz 60 dB Mod. 30%
Image Rejection	40 dB (98 MHz)

AM TUNER SECTION

Frequency Range	MW; 525 kHz ~ 1605 kHz (571 m ~ 187 m) SW ₁ ; 2.3 MHz ~ 7 MHz (130 m ~ 42.9 m) SW ₂ ; 7 MHz ~ 22 MHz (42.9 m ~ 13.6 m)
Intermediate Frequency (IF)	455 kHz
Sensitivity	MW; 200 μV/m SW ₁ ; 8 μV SW ₂ ; 11 μV
Image Rejection	MW; 35 dB (1 MHz) SW ₁ ; 20 dB (5 MHz) SW ₂ ; 9 dB (16 MHz)

TAPE DECK SECTION

Deck System	Auto-Stop Cassette System with Pause Control
Track System	4 Track, 2 Channel
Recording System	AC Bias 60 kHz
Erasing System	AC Erase 60 kHz
Tape Speed	4.75 cm/sec. (1-7/8 i.p.s.)
Frequency Response	40 Hz ~ 10 kHz (NORMAL) 40 Hz ~ 12 kHz (CrO ₂)
Wow and Flutter	0.2% (WRMS)

PHONOGRAPH SECTION

Player System	Belt-Drive, Fully Automatic Return
Turntable	28 cm
Turntable Speeds	33-1/3 and 45 rpm (2-speed)
Phono Motor	DC Electronic Governor Motor
Stylus	EPS41ST (SAPPHIRE)
Cartridge	EPC13STH (CERAMIC)

POWER SUPPLY

	AC 110V (100 ~ 115V), 120V (115 ~ 130V), 220V (200 ~ 225V), 240V (225 ~ 250V), 50/60 Hz
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POWER CONSUMPTION

	22W
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DIMENSIONS

(Width x Height x Depth)	SG-V03; 450 mm x 125 mm x 403 mm SG-V33; 450mm x 165 mm x 403 mm
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WEIGHT

	SG-V03; 4.8 kg
	SG-V33; 5.0 kg

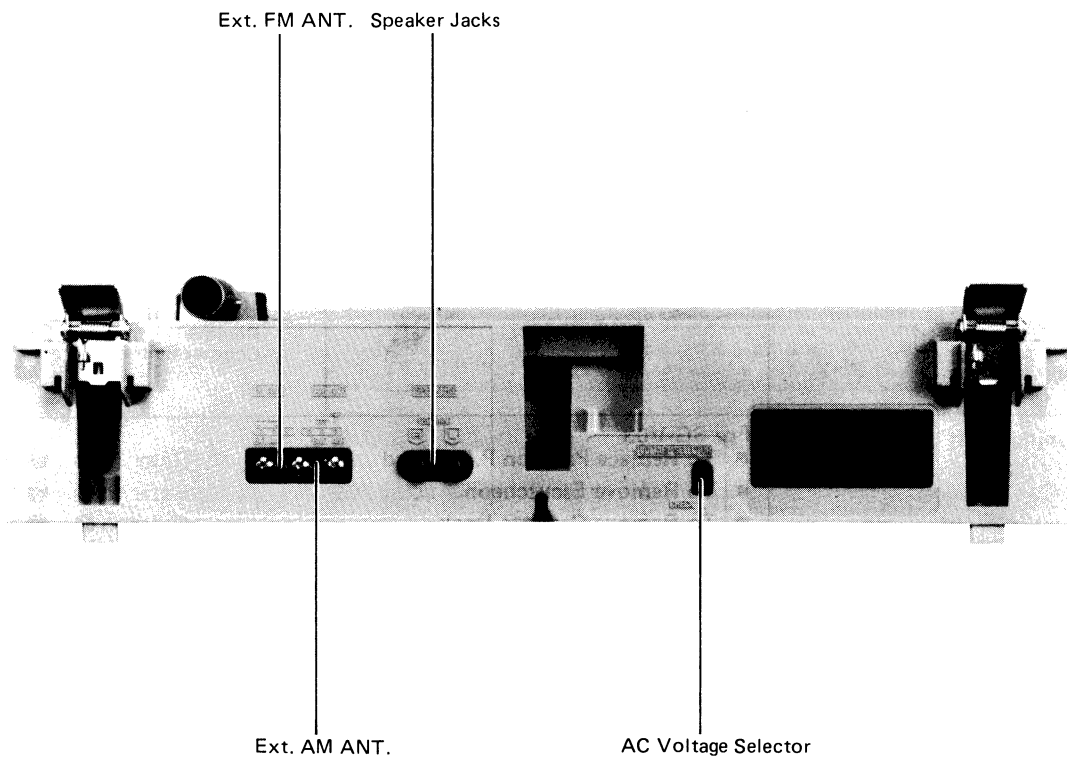
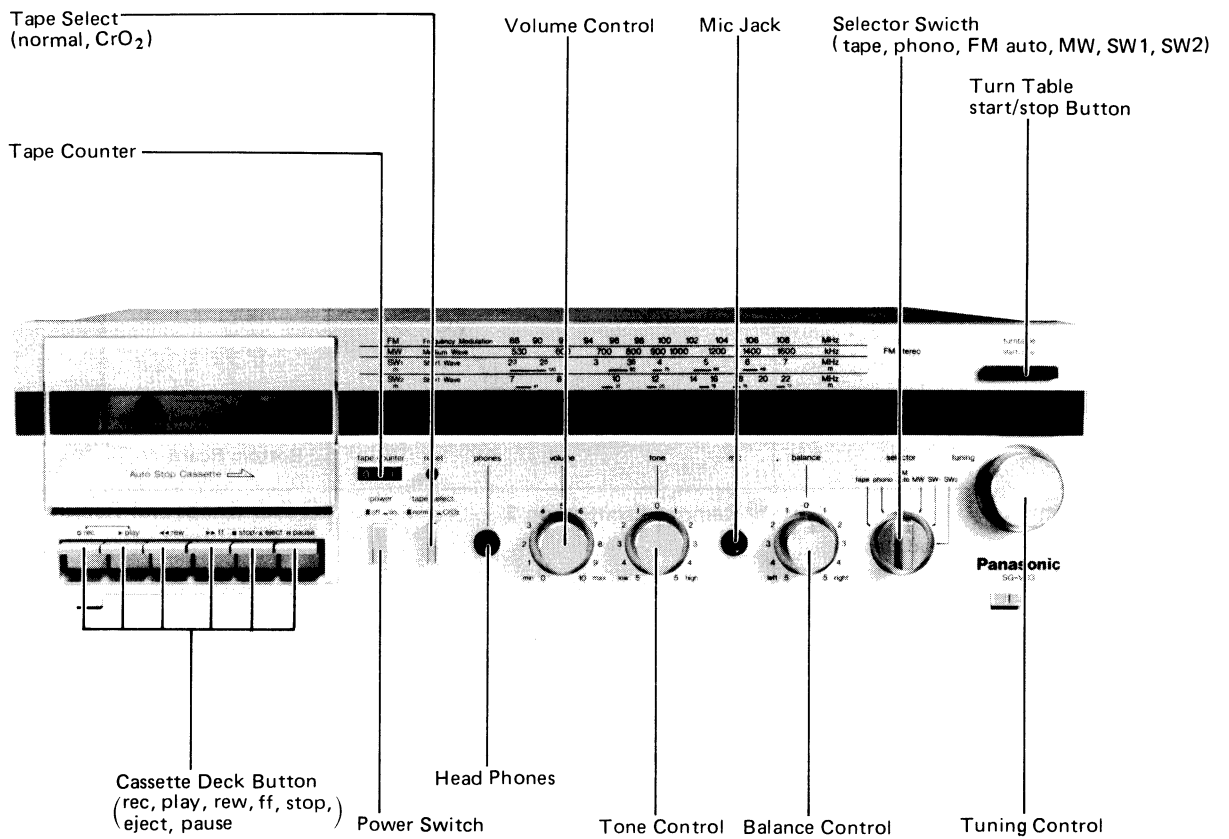
SPEAKER SYSTEM

	SB-175
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LOCATION OF CONTROLS

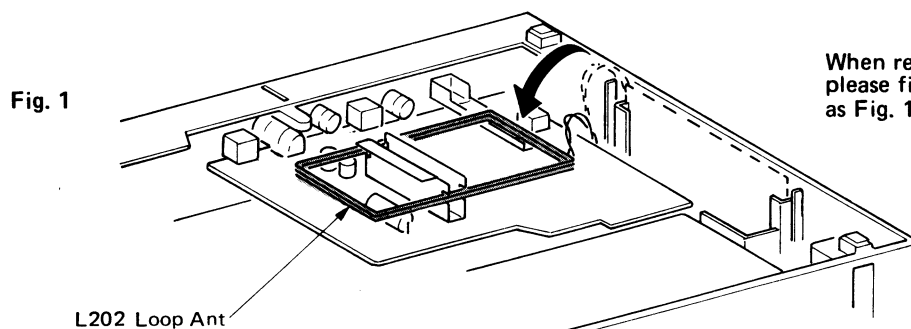


DISASSEMBLY INSTRUCTIONS

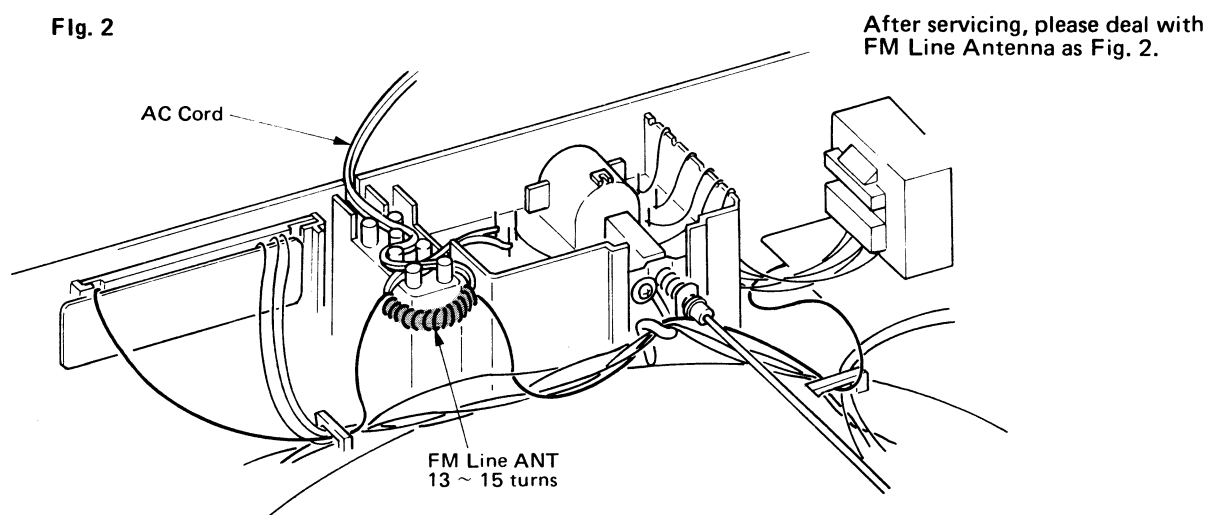
1 Remove Dust Cover Dust Cover	2 Remove Dust Cover Dust Cover	3 Remove Bottom Board Bottom Board
4 Remove Screw CAUTION: Disconnect the lead clamp for P.C. Board. Remove Rec. Spoke	5 Remove Escutcheon-1 Escutcheon	6 Pull Knobs and Remove Escutcheon-2 Remove Dial Cord Escutcheon Nuts Pull
7 Remove Cassette Lid Cassette Lid	8 Install Cassette Lid Cassette Lid Eject Spring	9 Remove Cassette Deck Remove Counter Belt Cassette Deck
10 Replace Tuning Shaft Screwdriver Remove Install Tuning Shaft Push	For SG-V03 ■ To Replace Parts on P.C. Board Refer to 1, 3 ~ 5 ■ To Remove Escutcheon Refer to 1, 3 ~ 6 ■ To Remove Cassette Deck Refer to 1, 3 ~ 4, 5, 7, 9 ■ To Replace Tuning Shaft Refer to 1, 3 ~ 6, 10 For SG-V33 ■ To Replace Parts on P.C. Board Refer to 2 ~ 5 ■ To Remove Escutcheon Refer to 2 ~ 6 ■ To Remove Cassette Deck Refer to 2 ~ 4, 5, 7, 9 ■ To Replace Tuning Shaft Refer to 2 ~ 6, 10	

SERVICE AID

■ Disposition of AM Loop Antenna



■ Disposition of FM Line Antenna

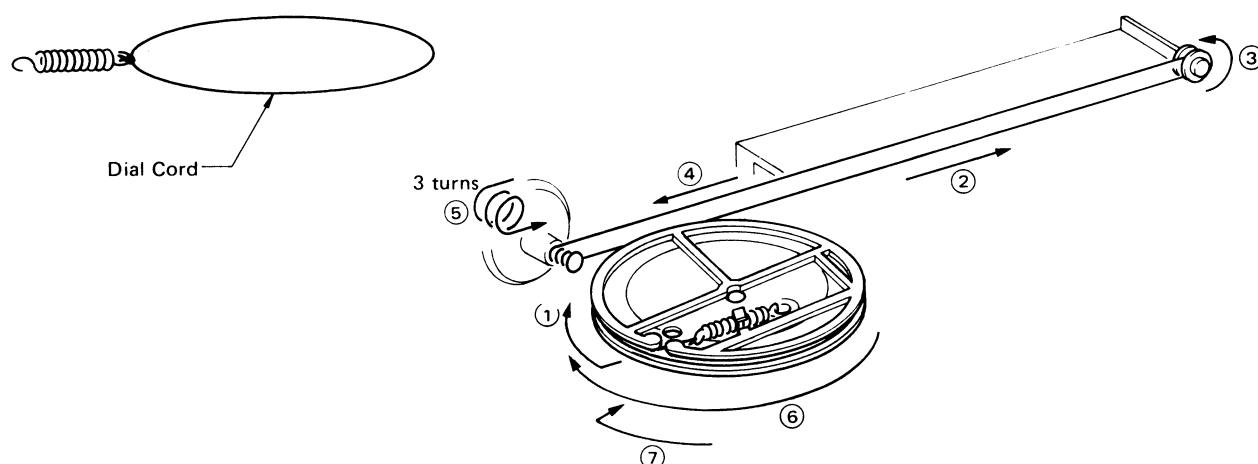


DIAL CORD STRINGING GUIDE

Note:

Dial Drum Turn Fully Clockwise

Dial Cord Loop Length . . 105.6 cm

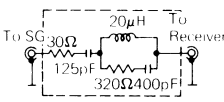


ALIGNMENT INSTRUCTIONS-1

■ Radio

Control Positions:

1. Volume Control . . . Maximum (AM-IF and RF, FM-RF); Minimum (FM-IF)
2. Tone Control Center
3. Balance Control Center
4. Function Selector . . . AM, FM AUTO, SW1, SW2
5. Power Switch ON
6. Output of signal generator should be no higher than necessary to obtain output reading.
7. Make certain that speaker system is connected to the receiver when aligning. (or use 8 Ω dummy load resistors).

STEP	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUST	REMARKS
	CONNECTION	FREQUENCY				
AM-IF AND RF ALIGNMENT						
1 (MW)	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455 kHz 30% Mod. with 400 Hz	Point of non-interference	Connect Vert. amp. input to scope between point TP201 and TP202 (ground).	T201 (AM IFT)	Adjust for maximum output.
2 (MW)		511 kHz 30% Mod. with 400 Hz	511 kHz	Output meter across speaker jack (L)	L203 (NAT Coil) L206 (OSC Coil)	Adjust for maximum output by L203.
3 (MW)		1650 kHz 30% Mod. with 400 Hz	1650 kHz		CT201 (ANT Trimmer) CT203 (OSC Trimmer)	Adjust for maximum output. Repeat steps (2) and (3).
4 (SW1)	Connect to EXT antenna and ground through SW Dummy antenna. (Refer to Fig. shown below).	2.249 MHz 30% Mod. with 400 Hz	2.249 MHz	Output meter across speaker jack (L)	L204 (ANT Coil) L207 (OSC Coil)	Adjust for maximum output by L204.
5 (SW1)		7.231 MHz 30% Mod. with 400 Hz	7.231 MHz		CT202 (ANT Trimmer) CT204 (OSC Trimmer)	Adjust for maximum output. Repeat steps (4) and (5)
6 (SW2)			6.84 MHz 30% Mod. with 400 Hz	6.84 MHz	L205 (ANT Coil) L208 (OSC Coil)	Adjust for maximum output.
7 (SW2)	SW DUMMY ANTENNA	22.79 MHz 30% Mod. with 400 Hz	22.79 MHz	Output meter across speaker jack (L)	CT205 (OSC Trimmer)	Adjust for maximum output. Repeat steps (6) and (7).
FM-IF ALIGNMENT						
1	High side through TP101 (IC101) and TPE (ground).	10.7 MHz (400 kHz SWP.)	point of non-interference	Connect vert. amp. input of scope between point TP201 and TP202 (ground)	T101 (FM 1st IFT) (Refer to Note.)	Adjust T101 for maximum amplitude and symmetrical curve. 
2					T201 (FM 2nd IFT)	Adjust for maximum amplitude and proper linearity between about ± 100 kHz markers. 
Note: Before aligning step 1, turn the core of T201 fully counterclockwise.						

Note: Before aligning step 1, turn the core of T201 fully counterclockwise.

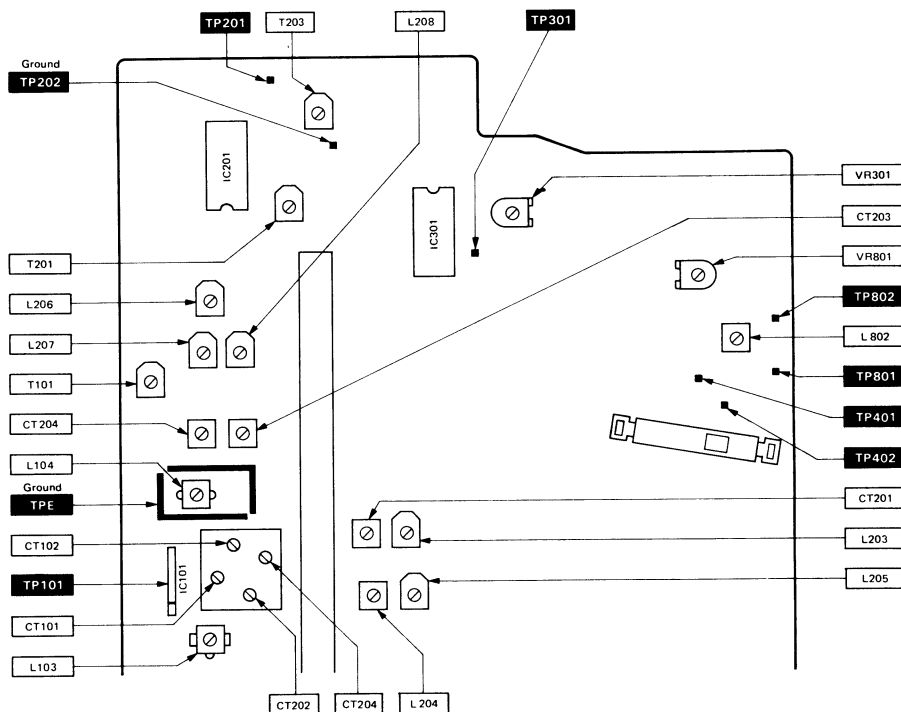
ALIGNMENT INSTRUCTIONS-2

STEP	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUST	REMARKS
	CONNECTION	FREQUENCY				
FM-RF ALIGNMENT						
1	Connect to EXT. FM antenna terminal through Dummy Antenna (75Ω)	87.20 MHz 30% Mod. with 400 Hz	87.20 MHz	Output meter across speaker jack (L)	L103 (FM ANT Coil) L104 (FM OSC Coil)	Adjust for maximum output.
2		109.20 MHz 30% Mod. with 400 Hz	109.20 MHz		CT101 (FM ANT Trimmer) CT102 (FM OSC Trimmer)	Adjust for maximum output. Repeat steps (1) and (2).
Note: As three output readings will be present, adjustments must be made at center frequency.						
FM STEREO ALIGNMENT						
Notes:	Tuner	Volume Control	Audible level of speaker sound			
		Tone Control	MIN			
		Band Selector	FM AUTO			
		Balance Control	Center			
EQUIPMENT CONNECTION			ADJUST	REMARKS		
Connect frequency counter to TP301 and TPE (ground) at 98 MHz, non modulation with 60 dB input (Mono Signal).			VR301	Adjust VR301 for 19 kHz ± 100 Hz on frequency counter reading.		

■ Cassette Tape Deck Alignment

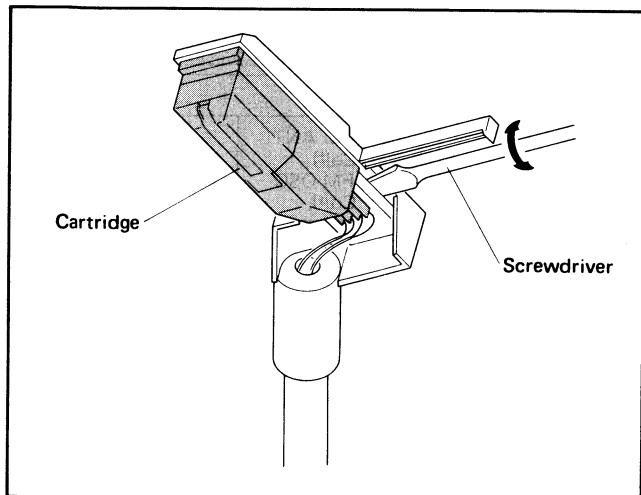
Control Positions: 1. Function Selector Tape 2. Tape Deck Condition Recording Condition						
STEP	ALIGNMENT ITEM	VTVM CONNECTION		TAPE SELECTOR	ADJUST	REMARK
		Positive	Negative			
1	Recording bias	TP401	TP402	Normal	VR801	Adjust VR801 for 3.7 ± 0.1 mV indication on VTVM. (CrO ₂ : 5.1 ~ 5.7 mV)
	R/P Head Azimuth	Speaker Terminal	Speaker Terminal	Normal	R/P Head Screw	- Playback a test tape (6.3kHz – 10dB) - Adjust screw for max. indication on VTVM.

ALIGNMENT POINTS

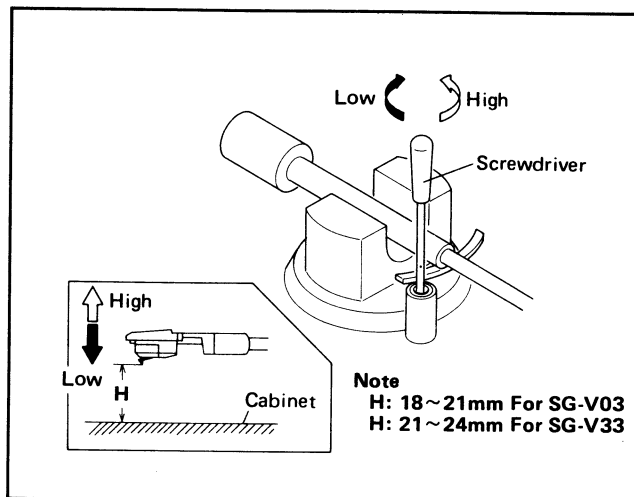


SERVICING THE RECORD PLAYER AND RECORD CHANGER

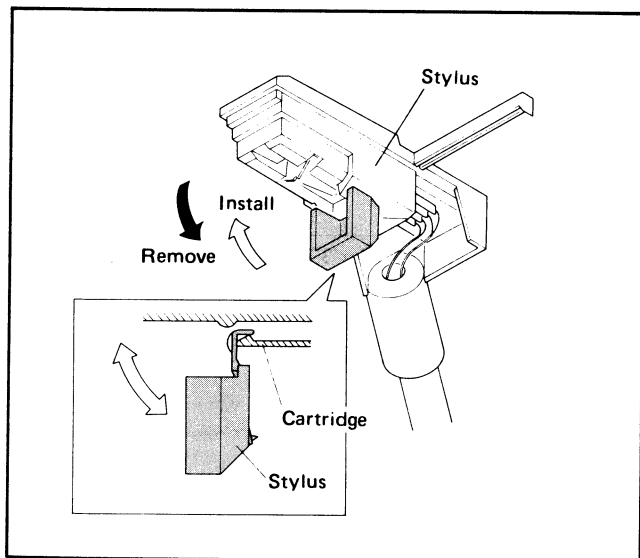
■ CARTRIDGE REPLACEMENT



■ TONE ARM LIFTING HEIGHT ADJUSTMENT

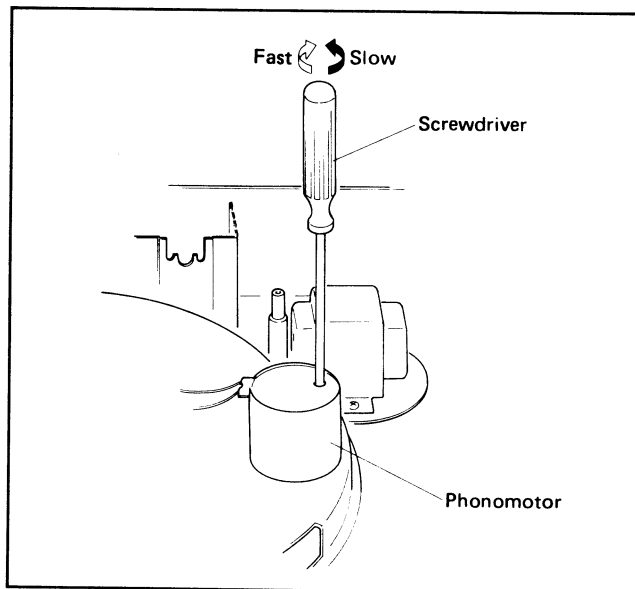


■ STYLUS REPLACEMENT

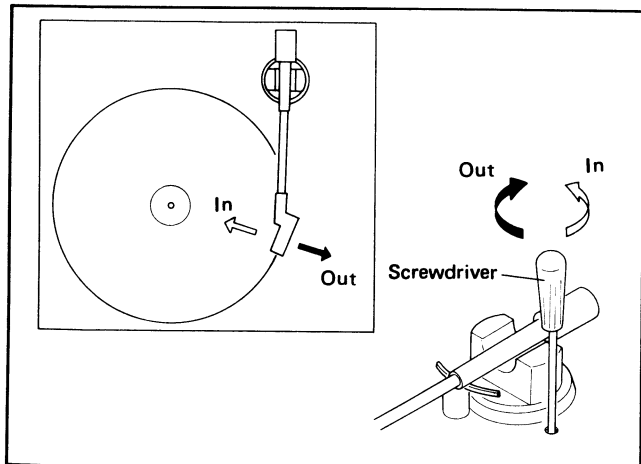


■ MOTOR SPEED ADJUSTMENT

Adjust the screw when the turntable rotation going out of normal speed.



■ STYLUS DROP POINT ADJUSTMENT



REPLACEMENT PARTS LIST

NOTES:

1. Important safety notice

Components identified by $\triangle$ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

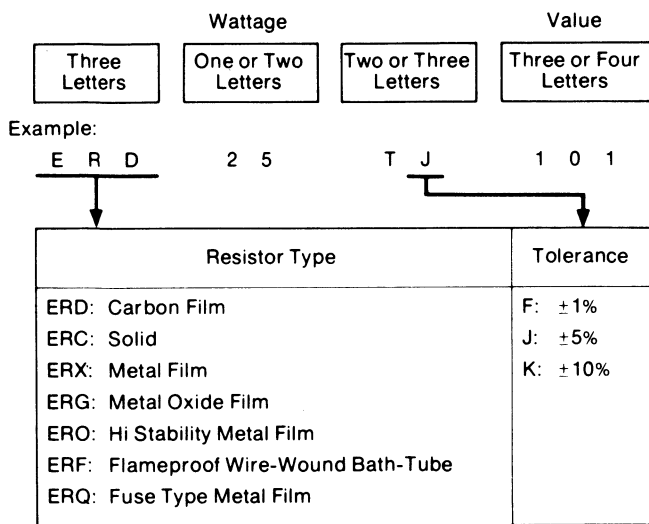
2. Parts No. listed in this parts list are of service parts.

Ref. No.	Part No.	Description	Per Set (pcs.)
TRANSISTORS			
Q101	2SA564	FM AFC	1
Q201	SC829-B	FM IF Amp.	1
Q401 ~ 404	2SC945L	Rec. Amp.	4
Q801	2SC1383NC	Bias OSC	1
Q802, 803	2SC945L	Muting	2
Q805	2SD592NC	Switching	1
Q806, 807	2SC945L	Mic. Amp.	2
INTEGRATED CIRCUITS			
IC101	AN7213	FM RF	1
IC201	AN7220B	FM AM IF, DET	1
IC301	AN7410N	FM MPX	1
IC401	UPC1228H	AF Amp.	1
IC701	AN7146H	Power Amp.	1
IC901	AN7812	AOC	1
DIODES			
D101	MA162A	FM AFC	1
D301	SLP156B	FM Stereo Eye	1
D802	LN224RP	Dial Pointer	1
D902 ~ D905 $\triangle$	SM112	RECT	4
COILS AND TRANSFORMERS			
L101	RLQY15S5-0	Coil, Choke	1
L102	SLQY38S-20	Coil, Choke	1
L103	SLD4N22-M	ANT Coil, FM	1
L104	SLO4N30-M	OSC Coil, FM	1
L105, 106	RLQY75S5-0	Coil, Choke	2
L202	SSA4	Loop ANT, AM	1
L203	SLA2M2-M	ANT Coil, MW	1
L204	SLA3M16-M	ANT Coil, SW1	1
L205	SLA3M18-M	ANT Coil, SW2	1
L206	SL02M6-M	OSC Coil, MW	1
L207	RL03M18-M	OSC Coil, SW1	1
L208	RL03M75-M	OSC Coil, SW2	1
L801	SLQZ200-2Y	Coil, Choke	1
L802	SL09Z38-K	Bias OSC Coil	1
T1 $\triangle$	SLT5V34-V	Power Transformer	1
T101	RLI4M101-M	FM IFT	1
T201	QLI2M102-M	AM IFT	1

Ref. No.	Part No.	Description	Per Set (pcs.)
T203	RLI4M101-M	FM IFT	1
CF201	SVF107MA53	FM CFT	1
CF202	QCRZZ455A7W	AM CFT	1
VARIABLE CAPACITORS			
CV101, 102 201, 202 (CT101, 102 202, 204)	RCV4RC2VK-M	Tuning Capacitor with Trimmer	1
CT201, 203	RCVCTY12B218	Trimmer	2
CT205	RCVCTY12B218	Trimmer	1
VARIABLE RESISTORS			
VR301	EVTS3MA00B14	Free Run, 10k Ω B	1
VR501, 502	EWCSMAF20B54	Tone, 50k Ω A	1
VR503, 504	EWCSMAF25B54	Volume, 50k Ω B	1
VR505	EWHGFAF20G15	Balance, 100k Ω G	1
VR801	EVTS3MA00B25	Bias, 200k Ω B	1
THERMISTOR			
TH801	ERTD2FHK202S	Thermistor	1
LAMP AND FUSE			
NL201	SAG20P152FH	Neon Lamp	1
F901 $\triangle$	XBA2E03NS5	Fuse 250V 300mA	1
SWITCHES			
SF1 ~ 12	SSR200	Function	1
ST1 ~ 4	SSS116	Rec/Play	1
S801	SSH150	Tape Selector	1
S901 $\triangle$	ESB8219A	Power	1
S902 $\triangle$	SSP36	Voltage Selector	1
PACKING			
PA1	SPN5052	Carton Box (for SG-V03)	1
	SPN5002	Carton Box (for SG-V33)	1
PA2	SPN4980	Pad, Left (for SG-V03)	1
	SPN4944-1	Pad, Front (for SG-V33)	1
PA3	SPN4982	Pad, Right (for SG-V03)	1
	SPN4946-1	Pad, Rear (for SG-V33)	1
PA4	XZB75X67C05	Set Cover	1
PA5	SQX50498	Intruction Book	1

REPLACEMENT PARTS LIST

Numbering System of Resistor

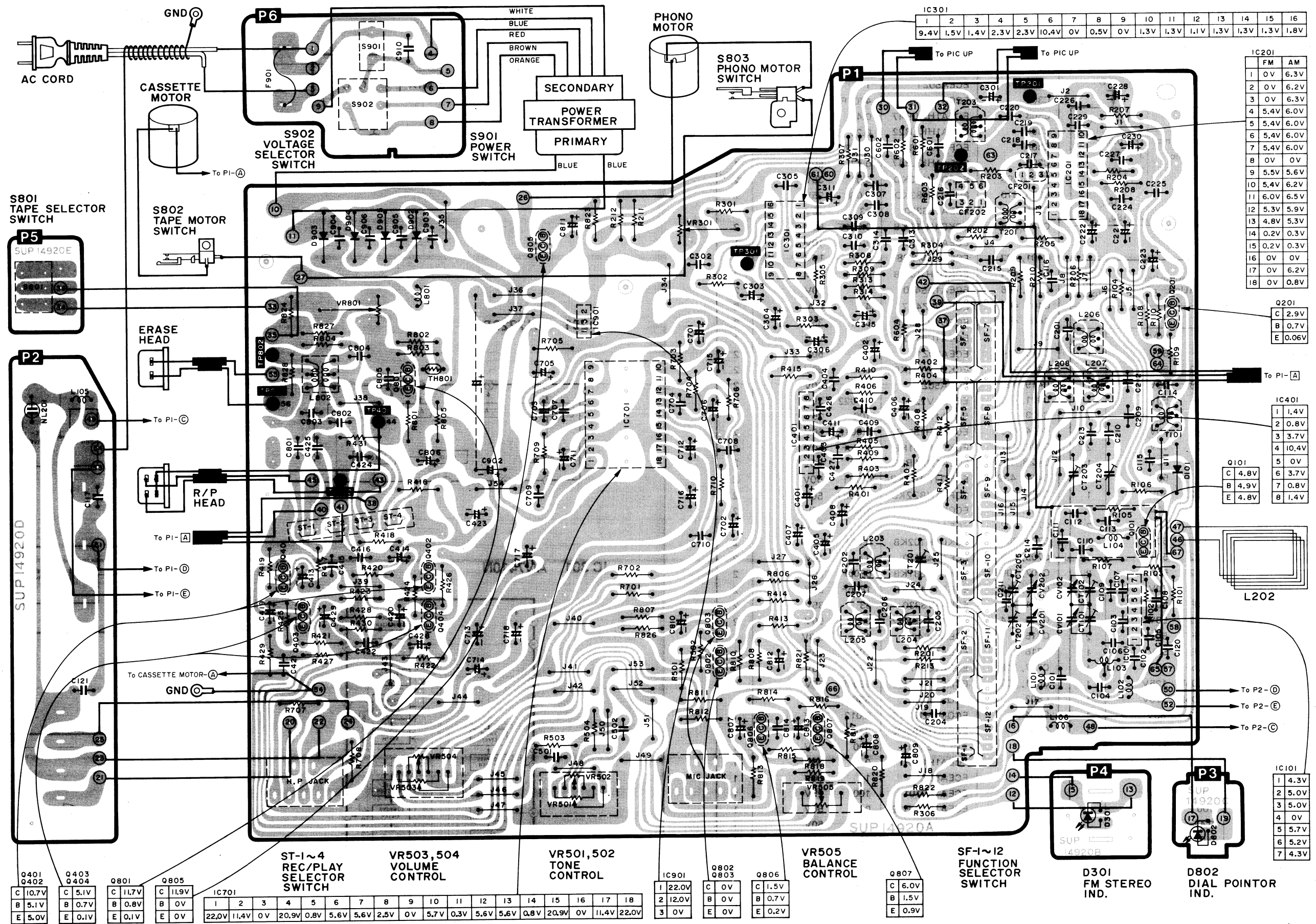


Ref. No.	Part No.	Description (Unit: Ω)	Per Set (pcs.)
RESISTORS			
R101	ERD25FJ331	330 1/4W	1
R102	ERD25TJ333	33k 1/4W	1
R103	ERD25FJ102	1k 1/4W	1
R104	ERD25TJ223	22k 1/4W	1
R105	ERD25TJ104	100k 1/4W	1
R106	ERD25TJ474	470k 1/4W	1
R107	ERD25FJ222	2.2k 1/4W	1
R108	ERD25TJ474	470k 1/4W	1
R109	ERD25FJ101	100 1/4W	1
R110	ERD25FJ472	4.7k 1/4W	1
R201	ERD25FJ470	47 1/4W	1
R202	ERD25FJ331	330 1/4W	1
R203	ERD25FJ681	680 1/4W	1
R204	ERD25FJ472	4.7k 1/4W	1
R205	ERD25FJ471	470 1/4W	1
R206	ERD25FJ101	100 1/4W	1
R207	ERD25TJ474	470k 1/4W	1
R208	ERD25TJ273	27k 1/4W	1
R209	ERD25FJ103	10k 1/4W	1
R210	ERD25FJ101	100 1/4W	1
R211	ERD25FJ681	680 1/4W	1
R212	ERD25FJ331	330 1/4W	1
R213	ERD25FJ101	100 1/4W	1
R301	ERD25TJ183	18k 1/4W	1
R302	ERD25FJ102	1k 1/4W	1
R304, 305	ERD25FJ103	10k 1/4W	2
R306	ERD25FJ681	680 1/4W	1
R307	ERD25FJ221	220 1/4W	1
R308, 309	ERD25TJ683	68k 1/4W	2

Ref. No.	Part No.	Description (Unit: Ω)	Per Set (pcs.)
R313, 314	ERD25TJ223	22K 1/4W	2
R401, 402	ERD25FJ102	1k 1/4W	2
R403, 404	ERD25TJ473	47k 1/4W	2
R405, 406	ERD25TJ334	330k 1/4W	2
R407, 408	ERD25FJ680	68 1/4W	2
R409, 410	ERD25TJ123	12k 1/4W	2
R411, 412	ERD25FJ102	1k 1/4W	2
R413, 414	ERD25FJ272	2.7k 1/4W	2
R415	ERD25FJ471	470 1/4W	1
R416	ERD25FJ101	100 1/4W	1
R417, 418	ERD25FJ103	10k 1/4W	2
R419, 420	ERD25FJ102	1k 1/4W	2
R421, 422	ERD25FJ101	100 1/4W	2
R423, 424	ERD25FJ472	4.7k 1/4W	2
R425, 426	ERD25TJ105	1M 1/4W	2
R427, 428	ERD25TJ223	22k 1/4W	2
R429, 430	ERD25TJ223	22k 1/4W	2
R431	ERD25FJ4R7	4.7 1/4W	1
R501, 502	ERD25FJ472	4.7k 1/4W	2
R503, 504	ERD25TJ183	18k 1/4W	2
R601, 602	ERD25TJ105	1M 1/4W	2
R603, 604	ERD25TJ105	1M 1/4W	2
R701, 702	ERD25FJ102	1k 1/4W	2
R703, 704	ERD25TJ473	47k 1/4W	2
R705, 706	ERD25FJ820	82 1/4W	2
R707, 708	ERD25FJ331	330 1/4W	2
R709, 710	ERD25FJ102	1k 1/4W	2
R801	ERD25FJ4R7	4.7 1/4W	1
R802	ERD25TJ153	15k 1/4W	1
R803	ERD25FJ222	2.2k 1/4W	1
R804	ERD25FJ152	1.5k 1/4W	1
R805	ERD25FJ100	10 1/4W	1
R806, 807	ERD25FJ272	2.7k 1/4W	2
R808	ERD25FJ221	220 1/4W	1
R810	ERD25FJ103	10k 1/4W	1
R811, 812	ERD25FJ103	10k 1/4W	2
R813	ERD25FJ102	1k 1/4W	1
R814	ERD25TJ154	150k 1/4W	1
R815	ERD25FJ332	3.3k 1/4W	1
R816	ERD25FJ103	10k 1/4W	1
R817	ERD25FJ682	6.8k 1/4W	1
R818	ERD25TJ564	560k 1/4W	1
R819	ERD25FJ102	1k 1/4W	1
R820	ERD25TJ473	47k 1/4W	1
R821	ERD25FJ101	100 1/4W	1
R822	ERD25FJ681	680 1/4W	1
R823	ERD25FJ472	4.7k 1/4W	1
R824	ERD25FJ332	3.3k 1/4W	1
R826, 827	ERD25FJ222	2.2k 1/4W	2
R828	ERD25FJ1R0	1 1/4W	1

CIRCUIT BOARD AND WIRING CONNECTION

MODEL SG-V03/SG-V33



REPLACEMENT PARTS LIST

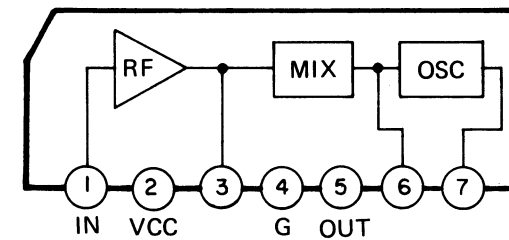
Numbering System of Capacitor			
Type	Voltage	Value	Tolerance
Four Letters	One or Two Letters	Two to Five Letters	One or Two Letters
Example: E C K H 1 H 3 3 3 M D			
Capacitor Type			Tolerance
ECCD: Temperature Compensating Ceramic			D: $\pm 0.5\text{pF}$
ECKD: High Dielectric Constant Ceramic			J: $\pm 5\%$
ECQM: Polyester			K: $\pm 10\%$
ECQS: Polystyrene Film			M: $\pm 20\%$
ECFD: Semiconductor Ceramic			P: $+100, -0\%$
ECEA: Electrolytic			Z: $+80, -20\%$

Ref. No.	Part No.	Description (Unit: μF)	Per Set (pcs.)
CAPACITORS			
C101	ECCD1H330K	33pF 50V	1
C102	ECCD1H100D	10pF 50V	1
C103, 104	ECKD1H223ZF	0.022 50V	2
C105	ECFD1E683MD	0.068 25V	1
C106	ECCD1H270K	27pF 50V	1
C107	ECCD1H050D	5pF 50V	1
C108	ECCD1H150K	15pF 50V	1
C109, 110	ECKD1H223ZF	0.022 50V	2
C111	ECCD1H150K	15pF 50V	1
C112	ECCD1H070D	7pF 50V	1
C113	ECKD1H223ZF	0.022 50V	1
C114	ECKD1H103ZF	0.01 50V	1
C115, 116	ECKD1H223ZF	0.022 50V	2
C117	ECCD1H100D	10pF 50V	1
C118	ECKD1H223ZF	0.022 50V	1
C201, 202	ECKD1H223ZF	0.022 50V	2
C204	ECCD1H080D	8pF 50V	1
C205, 206	ECCD1H100D	10pF 50V	2
C207	ECKD1H223ZF	0.022 50V	1
C209, 210	ECCD1H150K	15pF 50V	2
C211	ECCD1H100D	10pF 50V	1
C212	ECQS1361JZ	360pF 125V	1
C213	ECQS1152JZ	1500pF 125V	1
C214	ECQS1472JZ	4700pF 125V	1
C215	ECKD1H223ZF	0.022 50V	1
C216	ECCD1H470K	47pF 50V	1
C217	ECKD1H181K	180pF 50V	1
C218, 219	ECKD1H223ZF	0.022 50V	2
C220	ECCD1H470K	47pF 50V	1
C221	ECEA1HS100	10 50V	1
C222	ECEA1AS101	100 10V	1
C223	ECEA1HKLR47	0.47 50V	1
C224, 225	ECKD1H223ZF	0.022 50V	2
C226	ECKD1H471KB	470pF 50V	1
C227	ECKD1H103ZF	0.01 50V	1
C228	ECEA1ES101	100 25V	1
C229	ECKD1H223ZF	0.022 50V	1

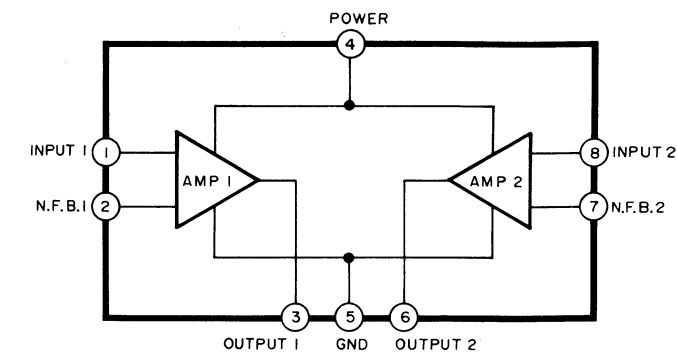
Ref. No.	Part No.	Description (Unit: μF)	Per Set (pcs.)
C230	ECEA1HKLR22	0.22 50V	1
C301	ECEA50Z1	1 50V	1
C302	ECQS1471JZ	470pF 125V	1
C303	ECEA1HKLR47	0.47 50V	1
C304	ECEA1HKLR22	0.22 50V	1
C305	ECFD1V473KD	0.047 35V	1
C306	ECEA1HKLR47	0.47 50V	1
C307, 308	ECFD1V103KD	0.01 35V	2
C309, 310	ECFD1E683KD	0.068 25V	2
C311	ECEA1CS330	33 16V	1
C313, 314	ECKD1H152KB	0.0015 50V	2
C315	ECEA1AS100	10 10V	1
C401, 402	ECEA16M6R8	6.8 16V	2
C403, 404	ECKD1H102KB	0.001 50V	2
C405, 406	ECEA1AS470	47 10V	2
C407, 408	ECEA25Z4R7	4.7 25V	2
C409, 410	ECFD1V103KD	0.01 35V	2
C411	ECEA1CS330	33 16V	1
C413, 414	ECEA50Z1	1 50V	2
C415, 416	ECKD1H102KB	0.001 50V	2
C419, 420	ECEA50Z1	1 50V	2
C421, 422	ECFD1V222	0.0022 35V	2
C423	ECEA1ES101	100 25V	1
C424, 425	ECKD1H152KB	0.0015 50V	2
C426, 427	ECKD1H151KB	150pF 50V	2
C428, 429	ECEA1HKLR22	0.22 50V	2
C431, 432	ECKD1H102KB	0.001 50V	2
C501, 502	ECFD1H822KD	0.0082 50V	2
C601, 602	ECCD1H100D	10pF 50V	2
C701, 702	ECEA50Z1	1 50V	2
C703, 704	ECKD1H102KB	0.001 50V	2
C705, 706	ECEA1AS470	47 10V	2
C707, 708	ECKD1H681KB	680pF 50V	2
C709, 710	ECKD1H181KB	180pF 50V	2
C711, 712	ECEA1VS330	33 35V	2
C713, 714	ECEA1HKLR22	0.22 50V	2
C715	ECEA0JS471	470 6.3V	1
C716	ECEA1ES101	100 25V	1
C717, 718	ECEA1CS471	470 16V	2
C801, 802	ECKD1H151KB	150pF 50V	2
C803	ECQS1332JZ	3300pF 125V	1
C804	ECQM1H123KZ	0.012 50V	1
C805	ECQM1H683MZ	0.068 50V	1
C806	ECEA1ES101	100 25V	1
C807	ECEA1HKLR1	0.1 50V	1
C808	ECEA50Z1	1 50V	1
C809	ECEA1ES101	100 25V	1
C810	ECEA1HKLR22	0.22 50V	1
C811	ECEA50Z1	1 50V	1
C812, 813	ECEA1HS100	10 50V	2
C814	ECKD1H102KB	0.001 50V	1
C901	ECKDKC103PF	0.01 400V	1
C902	ECEA1ES222	2200 25V	1
C903, 904	ECKD1H103ZF	0.01 50V	2
C905, 906	ECKD1H103ZF	0.01 50V	2

IC BLOCK DIAGRAM

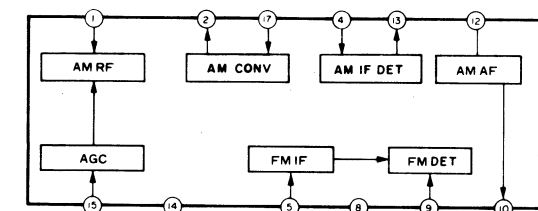
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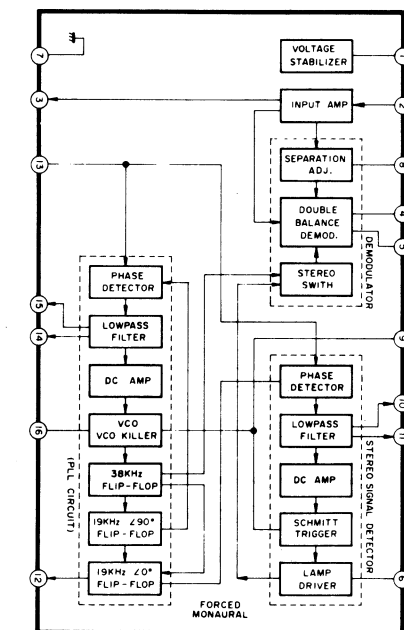
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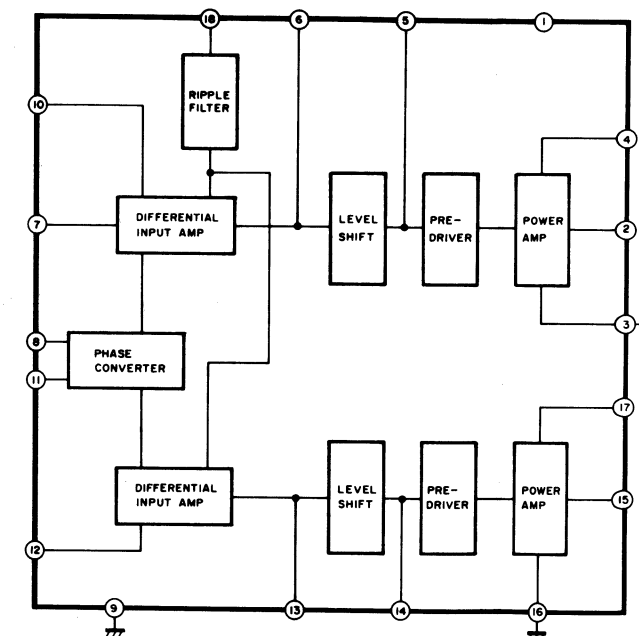
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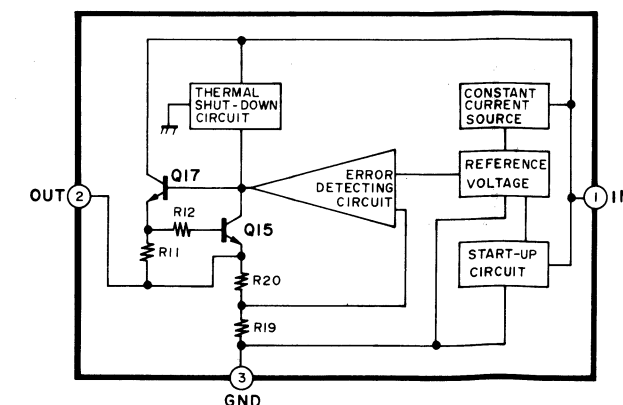
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IC 701 AN7146H

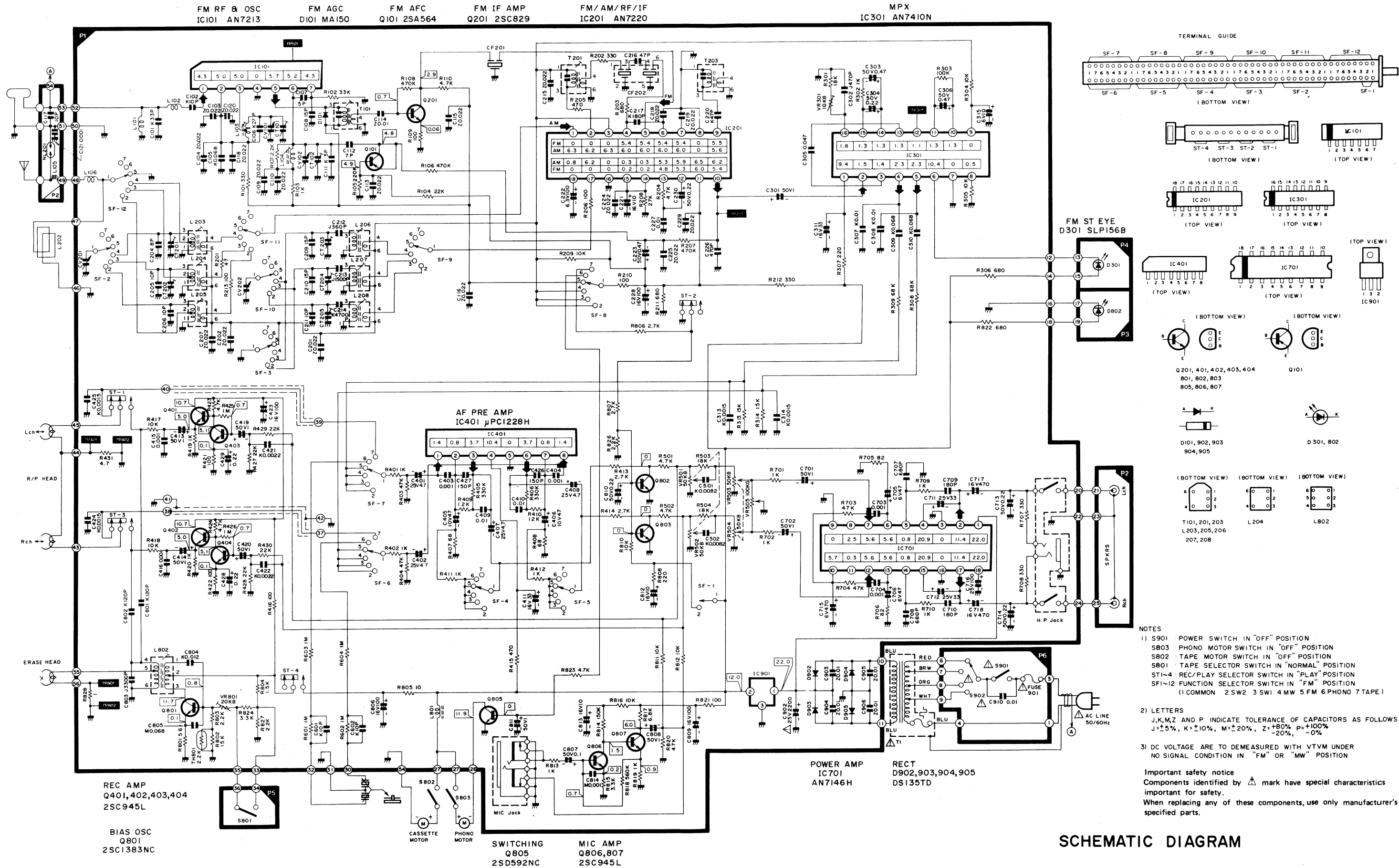


IC 901 AN7812



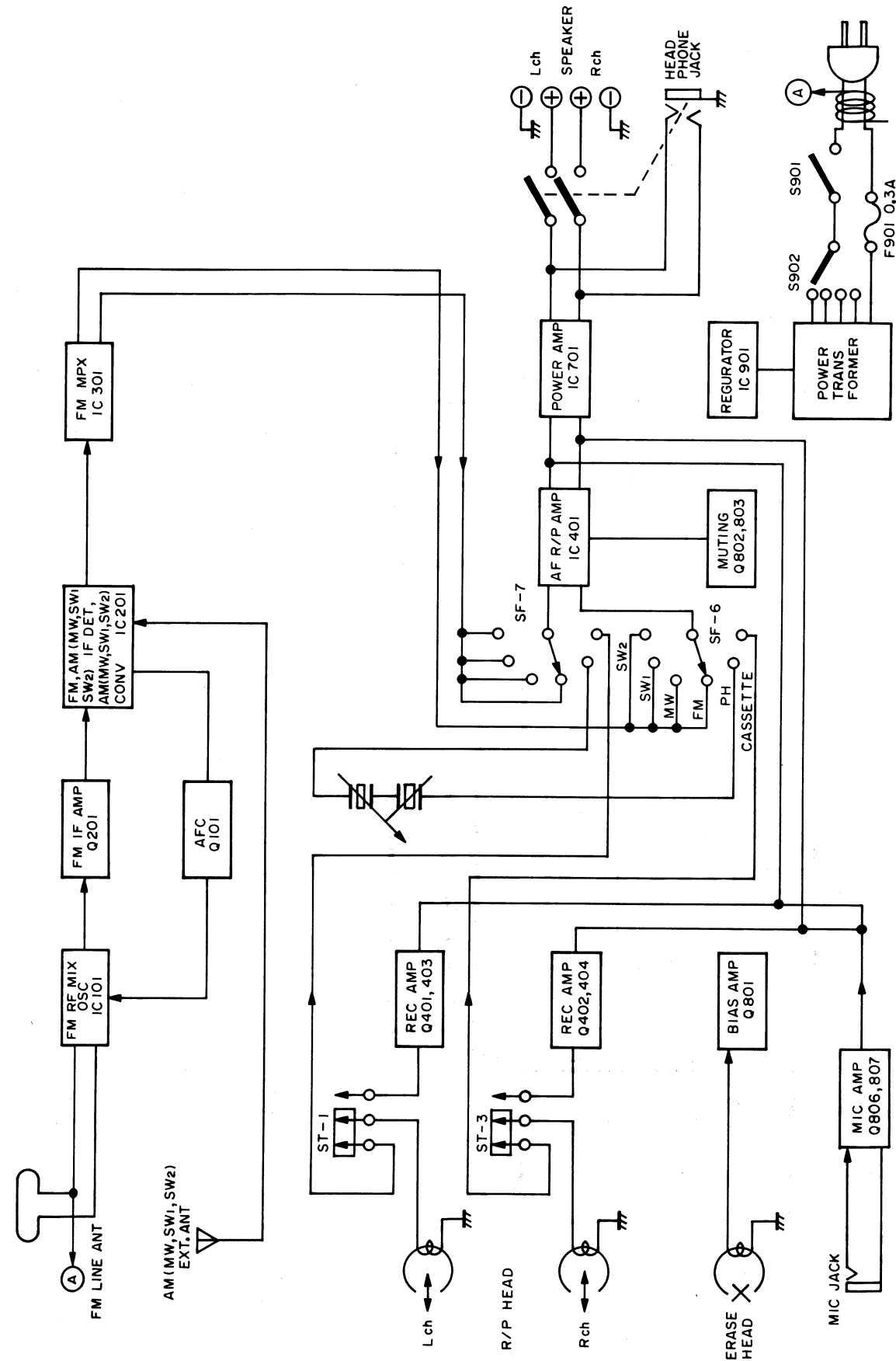
SCHEMATIC DIAGRAM

MODEL SG-V03/SG-V33

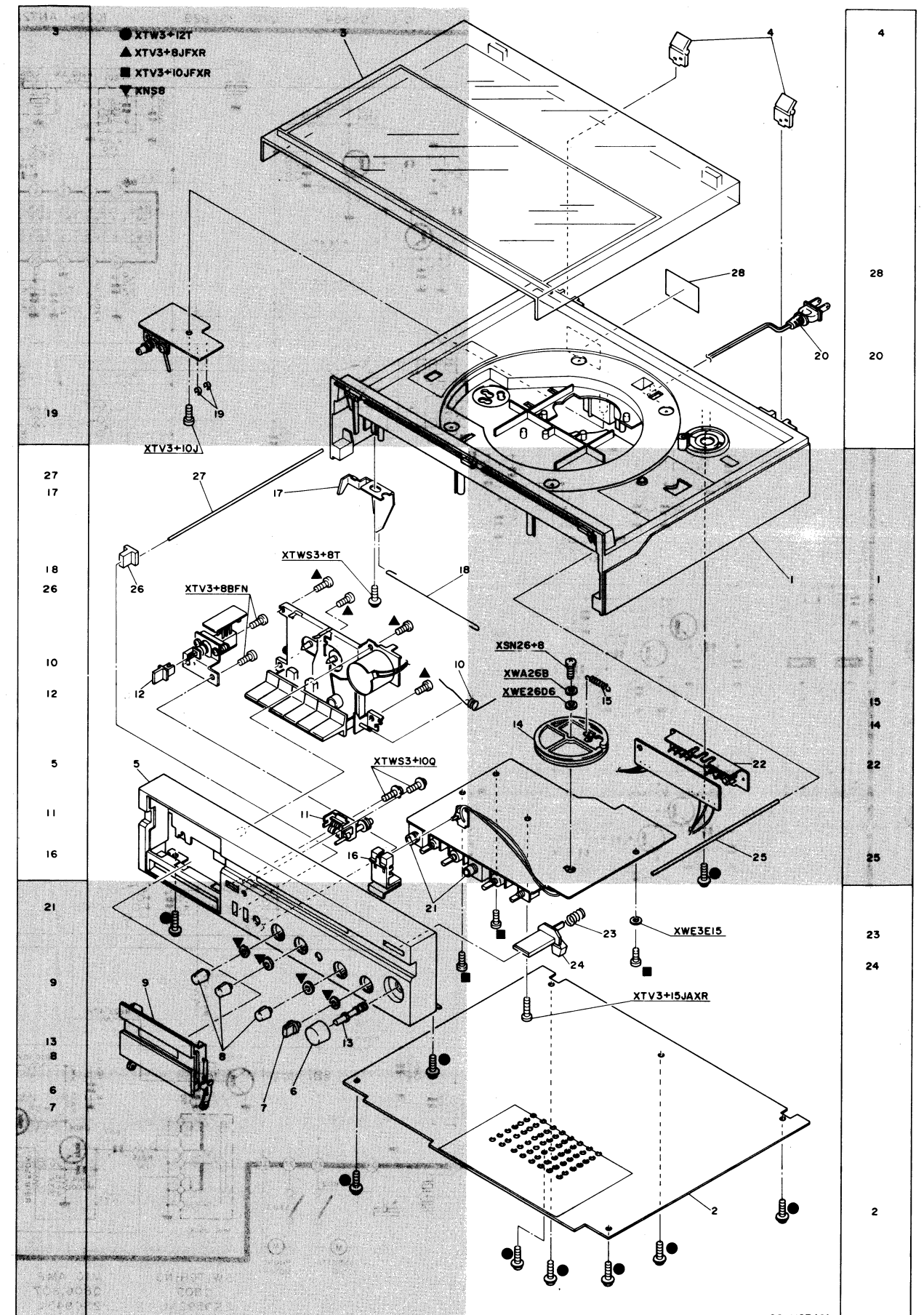


SCHEMATIC DIAGRAM

BLOCK DIAGRAM



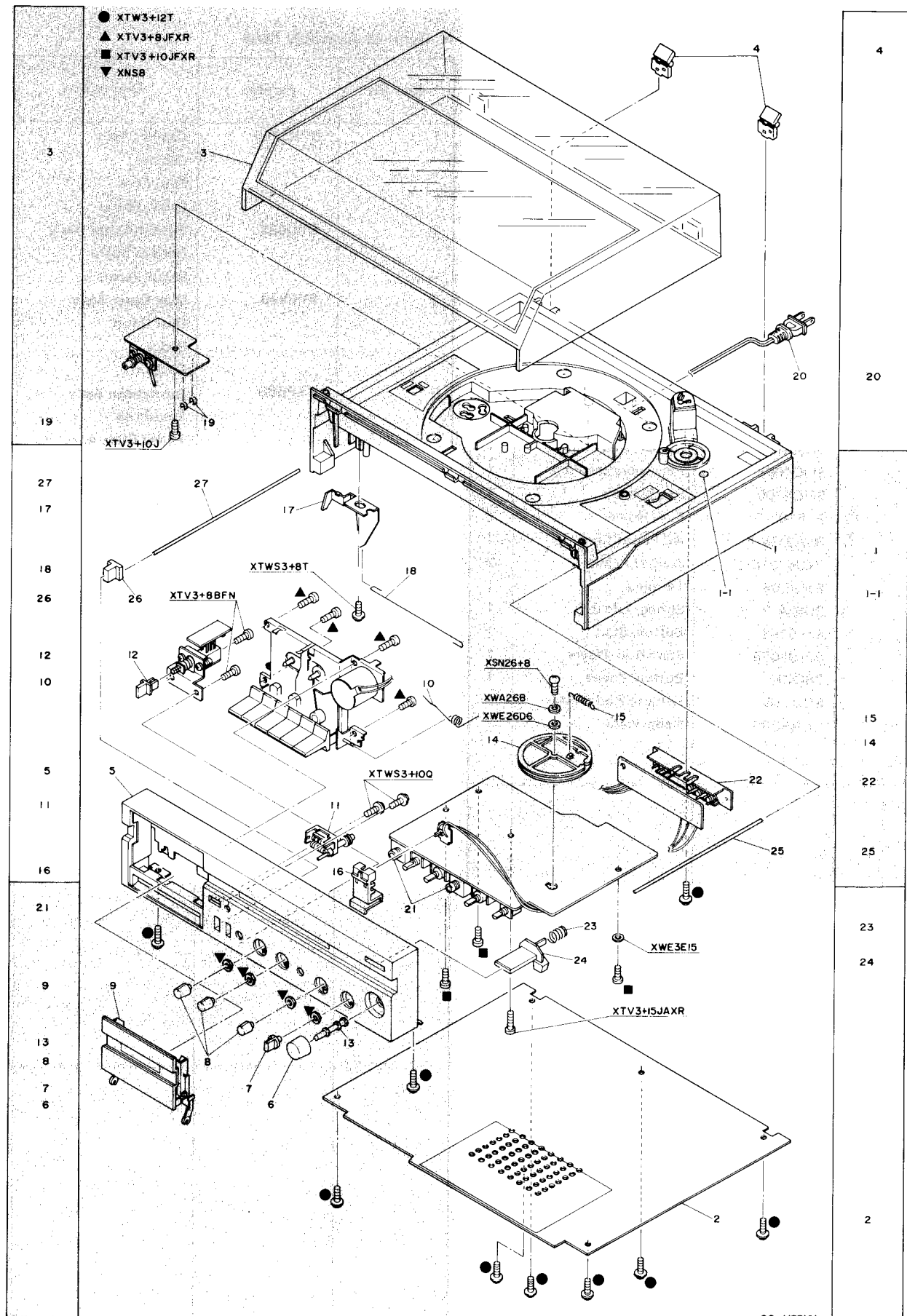
PARTS LOCATION OF CABINET AND CHASSIS



REPLACEMENT PARTS LIST OF CABINET AND CHASSIS

Ref. No.	Part No.	Description	Per Set (pcs.)	■ Items of Assembly Parts			
Ref. No.	Part No.	Description	Per Set (pcs.)	Ref. No.	Part No.	Description	Per Set (pcs.)
1	SYK1966	Cabinet Ass'y	1	1	SYK1966	Cabinet Ass'y	1
2	SYU462	Bottom Board Ass'y	1			Cabinet	(1)
3	SYE920	Dust Cover Ass'y	1			Felt, Foot	(2)
4	SBH9112-5	Hinge	2			Label, Stylus	(1)
5	SYP668	Escutcheon Ass'y	1	2	SYU462	Bottom Board Ass'y	1
6	SBN1002-2	Knob, Tuning	1			Bottom Board	(1)
7	SBN1068	Knob, Selector	1			Shield Paper	(1)
8	SBN1070	Knob, Volume	3	3	SYE920	Dust Cover Ass'y	1
9	SYE958	Cassette Lid Ass'y	1			Dust Cover	(1)
10	SMQ4094	Spring, Cassette Lid	1			Badge	(1)
11	SMQ3768	Counter	1			Cushion	(3)
12	SBC472-2	Button, Tape Selector	1	5	SYP668	Escutcheon Ass'y	1
13	SDT91302	Shaft, Tuning	1			Escutcheon	(1)
14	SDD80-6	Dial Drum	1			Tinted Glass A	(1)
15	RDS4170A	Spring, Dial Drum	1			Tinted Glass B	(1)
16	SDA94	Holder, Dial Pointer	1			Felt, Foot	(2)
17	SMQ4098	Rec Operation Plate	1			Spacer	(1)
18	SMQ4100	Rec Spoke	1	9	SYE958	Cassette Lid Ass'y	1
19	△ RJF107-2	Fuse Holder	2			Cassette Lid	(1)
20	△ RJA9YA-F	AC Power Cord	1			Tinted Glass	(1)
21	XCJ6P21E-1	Jack, H.P, Mic	2			Guide Sheet	(1)
22	SJF9504	Terminal	1			Cushion	(2)
23	SUS84-2	Spring, Lift B	1				
24	SJY5198	Button, Start	1				
25	SJY90078	Start Rod, Player	1				
26	SBC492	Button, Power	1				
27	SUH116	Remote Rod, Power	1				
28	SGN6883	Name Plate	1				

REPLACEMENT PARTS LIST OF CABINET AND CHASSIS



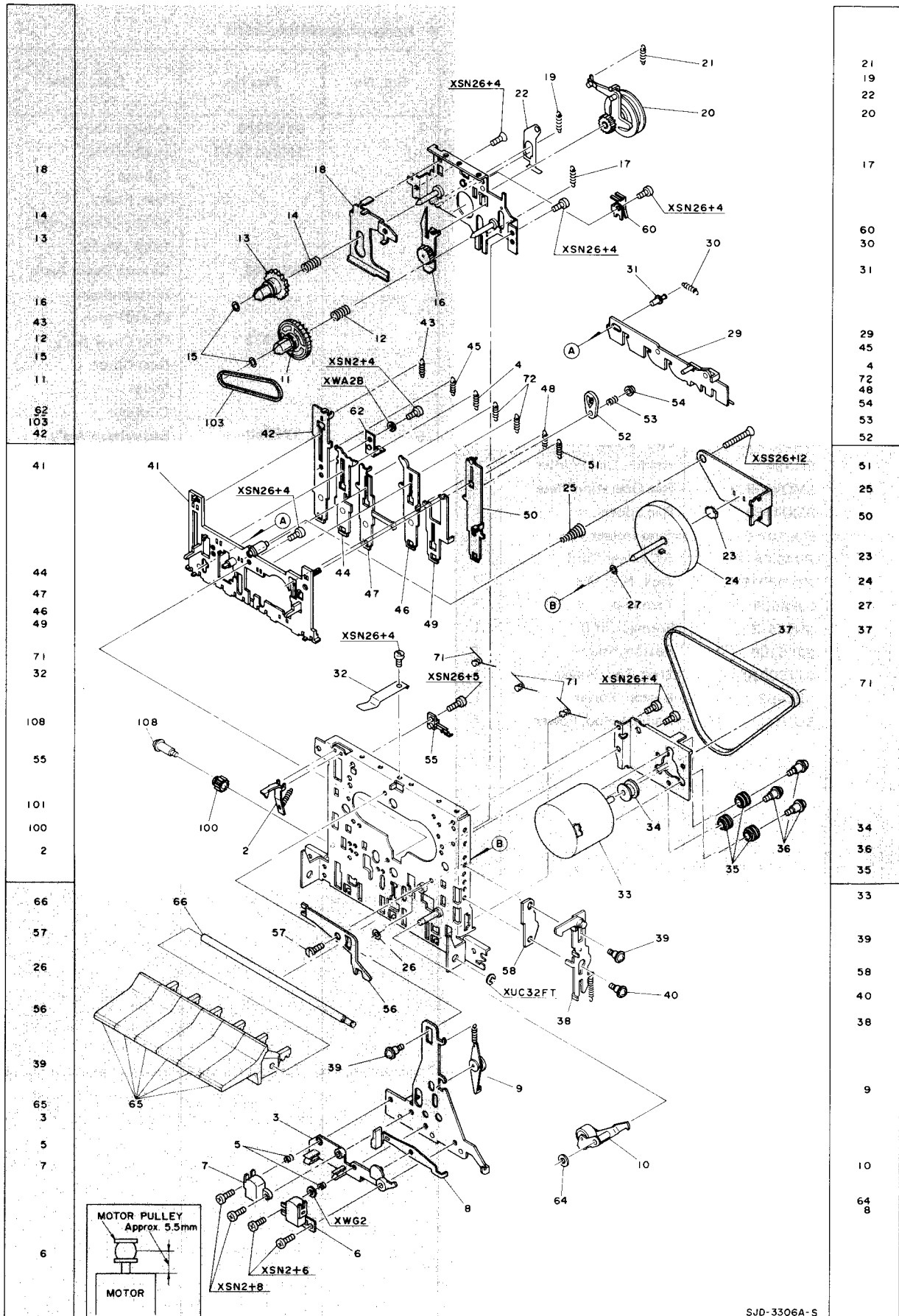
REPLACEMENT PARTS LIST OF CABINET AND CHASSIS

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SYK1976	Cabinet Ass'y	1
1-1	SFGK170-01	Rubber Cap	1
2	SYU462	Bottom Board Ass'y	1
3	SYE932	Dust Cover Ass'y	1
4	SBH9112-2	Hinge	2
5	SYP650	Escutcheon Ass'y	1
6	SBN1002-2	Knob, Tuning	1
7	SBN1068	Knob, Selector	1
8	SBN1070	Knob, Volume	3
9	SYE958	Cassette Lid Ass'y	1
10	SMQ4094	Spring, Cassette Lid	1
11	SMQ3768	Counter	1
12	SBC472-2	Button, Tape Selector	1
13	SDT91302	Shaft, Tuning	1
14	SDD80-6	Dial Drum	1
15	RDS4170A	Spring, Dial Drum	1
16	SDA94	Holder, Dial Pointer	1
17	SMQ4098	Rec Operation Plate	1
18	SMQ4100	Rec Spoke	1
19	△ RJF107-2	Fuse Holder	2
20	△ RJA9YA-F	AC Power Cord	1
21	XCJ6P21E-1	Jack, H.P, Mic	2
22	SJF9504	Terminal	1
23	SUS84-2	Spring, Lift B	1
24	SJY5198	Button, Start	1
25	SJY90078	Start Rod, Player	1
26	SBC492	Button, Power	1
27	SUH116	Remote Rod, Power	1

■ Items of Assembly Parts

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SYK1976	Cabinet Ass'y	1
1-1	SFGK170-01	Rubber Cap	(1)
		Cabinet	(1)
		Felt, Foot	(2)
		Rubber, Dust Cover	(2)
		Label, Stylus	(1)
2	SYU462	Bottom Board Ass'y	1
		Bottom Board	(1)
		Shield Paper	(1)
3	SYE932	Dust Cover Ass'y	1
		Dust Cover	(1)
		Badge	(1)
		Cushion	(3)
5	SYP650	Escutcheon Ass'y	1
		Escutcheon	(1)
		Tinted Glass A	(1)
		Tinted Glass B	(1)
		Felt, Foot	(2)
		Spacer	(1)
9	SYE958	Cassette Lid Ass'y	1
		Cassette Lid	(1)
		Tinted Glass	(1)
		Guide Sheet	(1)
		Cushion	(2)

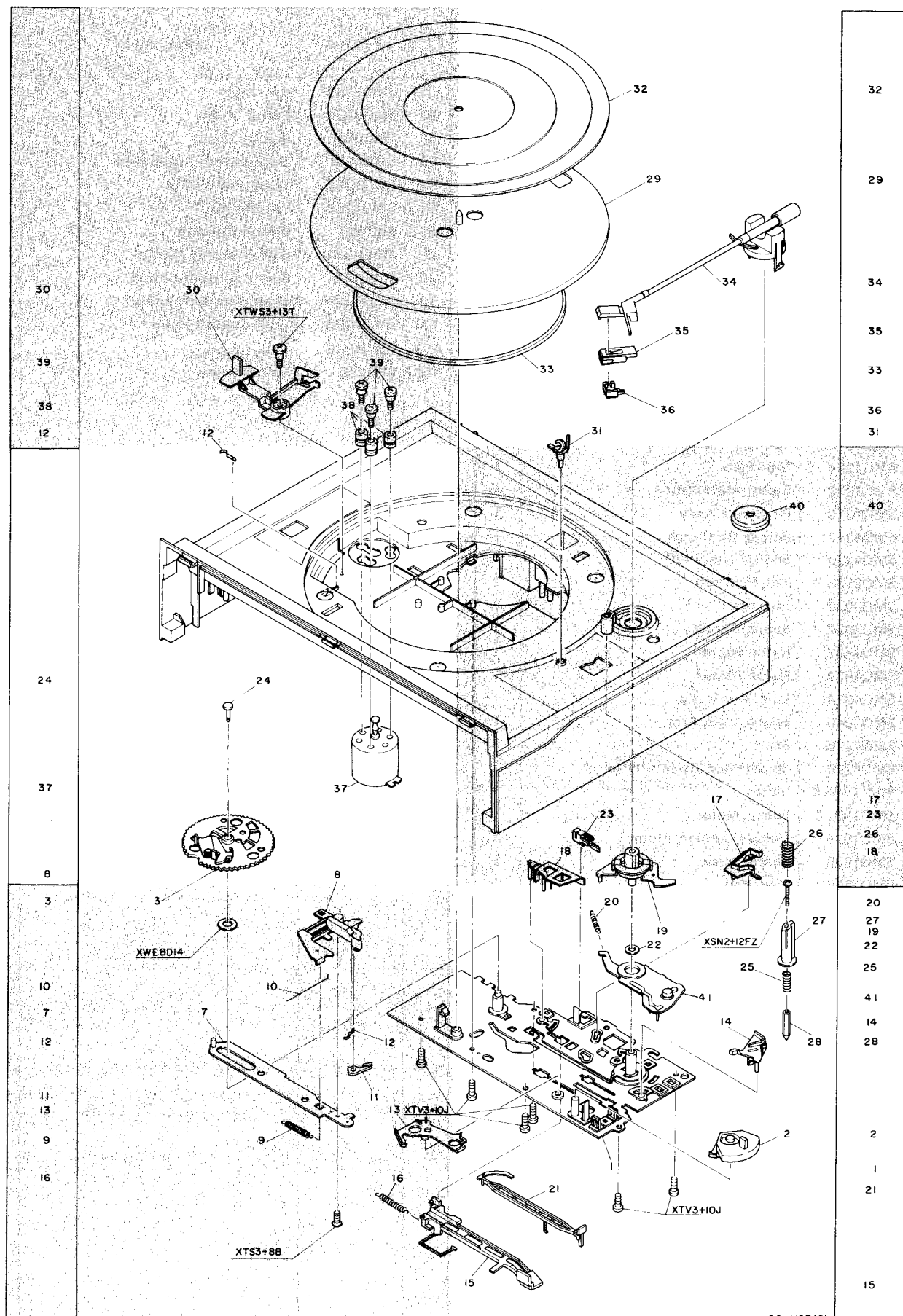
EXPLODED VIEW OF CASSETTE TAPE DECK



REPLACEMENT PARTS LIST OF CASSETTE TAPE DECK

Ref. No.	Part No.	Description	Per Set (pcs.)	Ref. No.	Part No.	Description	Per Set (pcs.)
2	SMQ4298	REC Safety Lever w/Spring	1	56	SMQ3982	Arm Lever	1
3	SMQ3894	Head Base	1	57	SMQ3984	Spacer Screw	1
4	SMQ3896	Spring, RC	1	58	SMQ3986	Bracket, Eject	1
5	SMQ3898	Spring, Head	2	60	SMQ4330	Guide Bracket, Main Belt	1
6	SJH80	R/P Head	1	62	SMQ4332	Spring Plate, REC	1
7	SJH56	Erase Head	1	64	SMQ4260	Poly Washer	1
8	SMQ4302	Lever Ass'y, Auto Stop	1	65	SBC488	Button, Cassette	6
9	SMQ4304	Take Up Roller Ass'y w/Spring	1	66	SMQ4334	Shaft, Cassette Button	1
10	SMQ3904	Pinch Roller Ass'y	1	71	SMQ4344	Spring, Cassette Button	3
11	SMQ3906	Reel Ass'y, Take Up	1	72	SMQ4346	Spring, FR Slide Lever	2
12	SMQ3908	Spring, Take Up Reel	1	100	SMQ4096	Gear, Cassette Holder	1
13	SMQ3910	Reel Ass'y, Supply	1	103	SMQ4066	Belt, Counter	1
14	SMQ3912	Spring, Supply Reel	1	108	SNE270	Spacer Screw	1
15	SMQ3914	Poly Washer	2				
16	SMQ4308	FF Idler Arm Ass'y	1				
17	SMQ3918	Spring, FF Idler Arm	1				
18	SMQ4264	Main Plate	1				
19	SMQ3922	Spring, Main Plate	1				
20	SMQ4310	RF Clutch Ass'y	1				
21	SMQ4312	Spring, RF Clutch	1				
22	SMQ4270	Spring Plate, RWD	1				
23	SMQ2538	Pad, Flywheel	1				
24	SMQ3930	Flywheel	1				
25	SMQ3932	Spring, Thrust	1				
26	SMQ1402	Nylon Washer	1				
27	SMQ3934	Nylon Washer	1				
29	SMQ4314	Lock Arm Ass'y	1				
30	SMQ3940	Spring, Lock Arm	1				
31	SMQ4276	Shaft	1				
32	SMQ4278	Spring Plate, Cassette Hold	1				
33	MMI6A2RK	Motor	1				
34	SMQ1802-1	Pulley, Motor	1				
35	SMQ1834	Rubber Cushion, Motor	3				
36	SMQ1908	Spacer Screw	3				
37	SMQ2556	Main Belt	1				
38	SMQ4316	Eject Slide Lever Ass'y w/Spring	1				
39	SMQ3950	Spacer Screw	2				
40	SMQ3952	Spacer Screw	1				
41	SMQ3954	Base, Push Button	1				
42	SMQ4318	Slide Lever Ass'y, REC	1				
43	SMQ3958	Spring, REC Slide Lever	1				
44	SMQ4320	Slide Lever Ass'y, Play	1				
45	SMQ3962	Spring, Play Slide Lever	1				
46	SMQ4322	Slide Lever Ass'y, FF	1				
47	SMQ4324	Slide Lever Ass'y, RWD	1				
48	SMQ3968	Spring, Stop Slide Lever	1				
49	SMQ4326	Slide Lever, Stop	1				
50	SMQ4328	Slide Lever Ass'y, Pause	1				
51	SMQ3974	Spring, Pause Slide Lever	1				
52	SMQ2444	Click Lever, Pause	1				
53	SMQ3976	Spring, Pause Click Lever	1				
54	SMQ3978	Stopper, Pause Click Lever	1				
55	SMQ3980	Leaf Switch	1				

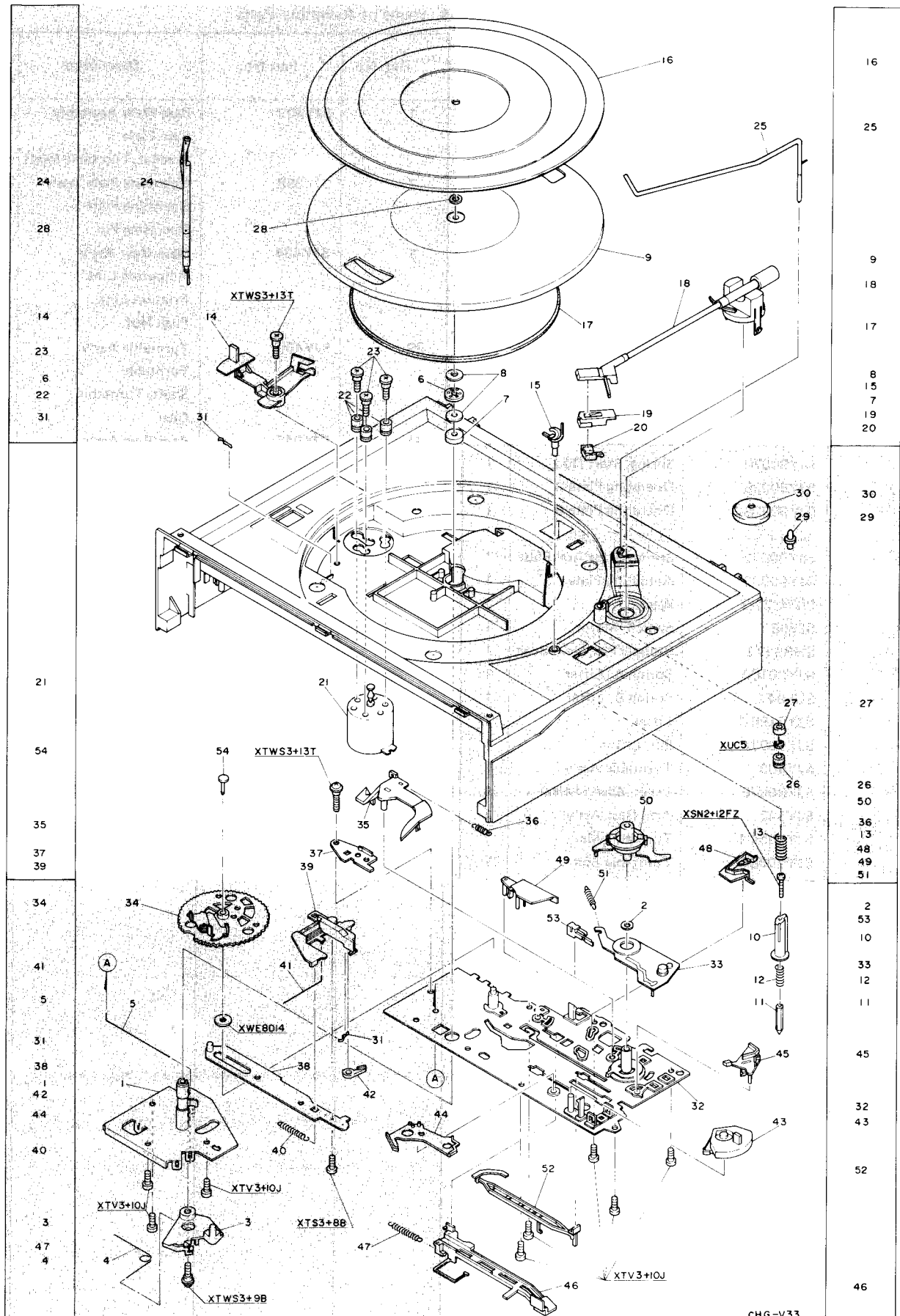
EXPLODED VIEW OF RECORD PLAYER



REPLACEMENT PARTS LIST OF RECORD PLAYER

Ref. No.	Part No.	Description	Per Set (pcs.)	■ Items of Assembly Parts			
1	SJY402	Base Plate Assembly	1	1	SJY402	Base Plate Assembly	1
2	SJY90074	Lever, Record Size	1			Base Plate	(1)
3	SJY434	Main Gear Ass'y	1			Bracket, Turntable Shaft	(1)
7	SJY398	Operating Plate Ass'y	1	7	SJY398	Operating Plate Ass'y	1
8	SJY90014-1	Bracket, Operating Plate	1			Operating Plate	(1)
9	SJY90066-1	Spring A, Operating Plate	1			Operating Pin	(1)
10	SJY90068-1	Spring B, Operating Plate	1	3	SJY434	Main Gear Ass'y	1
11	SJY90016	Operating Plate, Tone Arm	1			Actuating Link	(1)
12	SJY90018	Spring, Plate	2			Friction Link	(1)
13	SJY90020	Index Lever	1			Push Nut	(1)
14	SJY90022	Clamp Plate	1	29	SJY400	Turntable Ass'y	1
15	SJY90024-3	Start Rod	1			Turntable	(1)
16	SJY90070	Spring, Start Rod	1			Shaft, Turntable	(1)
17	SJY90026	Operating Plate A	1			Gear	(1)
18	SJY90028-3	Operating Plate B	1	31	SJY342	Arm Rest Ass'y	1
19	SJY90030-1	Tone Arm Plate	1			Arm Rest	(1)
20	SJY90072	Spring, Tone Arm Plate	1			Clumper	(1)
21	SJY90032	Actuating Plate	1	37	MMIV03	Motor Ass'y	1
22	SNW622-3	Washer	1			Motor	(1)
23	SSP66	Switch, Motor	1			Motor Pulley	(1)
24	SHR9174	Stopper Pin, Main Gear	1				
25	SJY90160	Spring A, Lifter	1				
26	SUS84-2	Spring B, Lifter	1				
27	SJY5196-1	Lifter	1				
28	SJY90034	Pin, Lifter	1				
29	SJY400	Turntable Ass'y	1				
30	SJY90076	Lever, Speed Select	1				
31	SJY342	Arm Rest Ass'y	1				
32	SJY4054-1	Turntable Mat	1				
33	SJY90080	Turntable Belt	1				
34	EPA641STB	Tone Arm	1				
35	EPC13STH	Cartridge with Stylus	1				
36	EPS41ST	Stylus	1				
37	MMIV03	Motor Ass'y	1				
38	SHG9092	Rubber	3				
39	SJY9168	Screw, Motor	3				
40	SJY5018-1	EP Adapter	1				
41	SJY406	PU Moving Plate	1				

EXPLODED VIEW OF RECORD CHANGER



REPLACEMENT PARTS LIST OF RECORD CHANGER

Ref. No.	Part No.	Description	Per Set (pcs.)	Ref. No.	Part No.	Description	Per Set (pcs.)
1	SJY436	Turntable Shaft Ass'y	1	54	SHR9174	Stopper Pin, Main Gear	1
2	SNW622-3	Washer	1				
3	SJY90116	Operating Lever A	1				
4	SJY90120	Operating Lever Spring	1				
5	SJY90122	Lock Spring	1				
6	SJY90124	Ball Bearing, Turntable	1				
7	SJY90126	Rubber Cushion, Turntable	1				
8	SJY90128	Washer, Turntable	2				
9	SJY430	Turntable Assembly	1				
10	SJY5196-2	Lifter	1				
11	SJY90034	Pin, Lifter	1				
12	SJY90160	Spring A, Lifter	1				
13	SUS84-2	Spring B, Lifter	1				
14	SJY90076	Lever, Speed Select	1				
15	SJY342	Arm Rest Assembly	1				
16	SJY4056	Turntable Mat	1				
17	SJY90080	Turntable Belt	1				
18	EPA641STB	Tone Arm	1				
19	EPC13STH	Cartridge with Stylus	1				
20	EPS41ST	Stylus	1				
21	MMIV03	Motor Assembly	1				
22	SHG9092	Rubber	3				
23	SJY9168	Screw, Motor	3				
24	SJY428	Multiple-Plug Spindle	1				
25	SJY90144	Record Holder Shaft	1				
26	SHG9100	Rubber, Record Holder Shaft	1				
27	SJY90150	Ring, Record Holder Shaft	1				
28	SJY90158	Stop Ring, Turntable	1				
29	SJY7004	Manual Spindle	1				
30	SJY5018-1	EP Adapter	1				
31	SJY90018	Spring Plate	2				
32	SJY432	Base Plate	1				
33	SJY406	PU Moving Plate	1				
34	SJY434	Main Gear Ass'y	1				
35	SJY90154	Select Moving Plate	1				
36	SJY90156	Spring	1				
37	SJY90118	Operating Lever B	1				
38	SJY398	Operating Plate Ass'y	1				
39	SJY90014-1	Bracket, Operating Plate	1				
40	SJY90066-1	Spring A, Operating Plate	1				
41	SJY90068-1	Spring B, Operating Plate	1				
42	SJY90016	Operating Plate, Tone Arm	1				
43	SJY90074	Lever, Record Size	1				
44	SJY90020	Index Lever	1				
45	SJY90022	Clamp Plate	1				
46	SJY90024-3	Start Rod	1				
47	SJY90070	Spring, Start Rod	1				
48	SJY90026	Operating Plate A	1				
49	SJY90028-4	Operating Plate B	1				
50	SJY90030-1	Tone Arm Plate	1				
51	SJY90072	Spring, Tone Arm Plate	1				
52	SJY90032-1	Actuating Plate	1				
53	SSP66	Switch, Motor	1				